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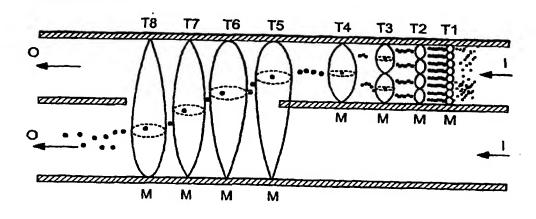
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(72) Inventors; and

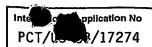
(75) Inventors/Applicants (for US only): STRAND, David [US/US]; 16 Nason Hill Lane, Sherborn, MA 01770 (US). For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND DEVICE FOR ULTRASONICALLY MANIPULATING PARTICLES WITHIN A FLUID



(57) Abstract: Fluid-handling methods and devices for ultrasonic manipulation of fluid-borne particles comprise a fluid-handling manifold and an ultrasonic particle manipulator defining an ultrasonic cavity within the manifold. Fluid-borne particles introduced into the manifold are manipulated by controlling ultrasonic standing waves at the ultrasonic cavity. Cavities having non-uniform configurations, asymmetric standing waves and/or multiple ultrasonic cavities within the manifold are operative to control the movement of the fluid-borne particles, optionally including collecting and holding such particles, transferring particles through an intersection from one channel to another, etc. Solid phase extraction (SPE) particles, biological particles and other fluid-borne particles can be manipulated within the fluid-handling manifold.

### INTERNATIONAL SEARCH REPORT



A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B01D43/00 B01D51/08

B01D21/00

A61M1/36

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7-801D-A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

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